

Serial Number: 09/308,830

ENTERED 1/6/95

#14 SK 8/16/00

- Changed a file from non-ASCII to ASCII
- Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- Edited a format error in the Current Application Data section, specifically:
- Edited the Current Application Data section with the actual current number. The number inputted by the applicant was  the prior application data; or  other \_\_\_\_\_
- Added the mandatory heading and subheadings for "Current Application Data".
- Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- Changed the spelling of a mandatory field (the headings or subheadings), specifically:
- Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
- Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
- Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- Inserted colons after headings/subheadings. Headings edited included:
- Deleted extra, invalid, headings used by an applicant, specifically:
- Deleted:  non-ASCII "garbage" at the beginning/end of files;  secretary initials/filename at end of file;  page numbers throughout text;  other invalid text, such as \_\_\_\_\_
- Inserted mandatory headings, specifically:
- Corrected an obvious error in the response, specifically:
- Edited identifiers where upper case is used but lower case is required, or vice versa.
- Corrected an error in the Number of Sequences field, specifically:
- A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- Other:

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

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AUG 15 2008

TECH CENTER 1600/2800

RAW SEQUENCE LISTING DATE: 08/10/2000  
PATENT APPLICATION: US/09/308,830 TIME: 18:06:36

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

## **SEQUENCE LISTING**

C--> 5 (1) GENERAL INFORMATION:  
C--> 7 (i) APPLICANT: Regents of the University of Minnesota  
C--> 9 (ii) TITLE OF INVENTION: MUTANTS OF STREPTOCOCCAL TOXIN A  
C--> 10 AND METHODS OF USE  
C--> 12 (iii) NUMBER OF SEQUENCES: 13  
C--> 14 (iv) CORRESPONDENCE ADDRESS:  
C--> 15 (A) ADDRESSEE: Merchant & Gould P.C.  
C--> 16 (B) STREET: P.O. Box 2903  
C--> 17 (C) CITY: Minneapolis  
C--> 18 (D) STATE: MN  
C--> 19 (E) COUNTRY: USA  
C--> 20 (F) ZIP: 55402-0903  
C--> 22 (v) COMPUTER READABLE FORM:  
C--> 23 (A) MEDIUM TYPE: Diskette  
C--> 24 (B) COMPUTER: IBM Compatible  
C--> 25 (C) OPERATING SYSTEM: DOS  
C--> 26 (D) SOFTWARE: FastSEQ for Windows Version 2.0  
C--> 28 (vi) CURRENT APPLICATION DATA:  
C--> 29 (A) APPLICATION NUMBER: US/09/308,830  
C--> 30 (B) FILING DATE: 04-Aug-1999  
C--> 36 (C) CLASSIFICATION:  
C--> 38 (vii) PRIOR APPLICATION DATA:  
C--> 39 (A) APPLICATION NUMBER: PCT/US97/22228  
C--> 40 (B) FILING DATE: 05-DEC-1997  
C--> 41 (A) APPLICATION NUMBER: 60/032,930  
C--> 42 (B) FILING DATE: 06-DEC-1996  
C--> 44 (viii) ATTORNEY/AGENT INFORMATION:  
C--> 45 (A) NAME: Skoog, Mark T  
C--> 46 (B) REGISTRATION NUMBER: 40,178  
C--> 47 (C) REFERENCE/DOCKET NUMBER: 600.346USWO  
C--> 49 (ix) TELECOMMUNICATION INFORMATION:  
C--> 50 (A) TELEPHONE: 612-332-5300  
C--> 51 (B) TELEFAX: 612-332-9081  
C--> 52 (C) TELEX:  
C--> 57 (2) INFORMATION FOR SEQ ID NO: 1:  
C--> 59 (i) SEQUENCE CHARACTERISTICS:  
C--> 60 (A) LENGTH: 29 base pairs  
C--> 61 (B) TYPE: nucleic acid  
C--> 62 (C) STRANDEDNESS: single  
C--> 63 (D) TOPOLOGY: linear  
C--> 65 (ii) MOLECULE TYPE: Genomic DNA  
C--> 67 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
C--> 69 CCATCACGGG TGGATTCTG AAACAGGTG  
C--> 71 (2) INFORMATION FOR SEQ ID NO: 2:  
C--> 73 (i) SEQUENCE CHARACTERISTICS:  
C--> 74 (A) LENGTH: 47 base pairs

29

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/308,830

DATE: 08/10/2000  
TIME: 18:06:36

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

75	(B) TYPE: nucleic acid	
76	(C) STRANDEDNESS: single	
77	(D) TOPOLOGY: linear	
79	(ii) MOLECULE TYPE: Genomic DNA	
81	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
83	CCATCACGCC CCCCGTCGAC GATAAAATAG TTGCTAAGCT ACAAGCT	47
85	(2) INFORMATION FOR SEQ ID NO: 3:	
87	(i) SEQUENCE CHARACTERISTICS:	
88	(A) LENGTH: 172 base pairs	
89	(B) TYPE: nucleic acid	
90	(C) STRANDEDNESS: single	
91	(D) TOPOLOGY: linear	
93	(ii) MOLECULE TYPE: Genomic DNA	
95	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:	
97	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
98	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
99	ATTTCCATAA ATATTAATAA ATAATTAAAA ATAATAATAAT AAATAATTAA TC	172
102	(2) INFORMATION FOR SEQ ID NO: 4:	
104	(i) SEQUENCE CHARACTERISTICS:	
105	(A) LENGTH: 172 base pairs	
106	(B) TYPE: nucleic acid	
107	(C) STRANDEDNESS: single	
108	(D) TOPOLOGY: linear	
110	(ii) MOLECULE TYPE: Genomic DNA	
112	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:	
114	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
115	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
116	ATTTCCATAA ATATTAATAA ATAATTAAAA ATAATAATAAT AAATAATTAA TC	172
118	(2) INFORMATION FOR SEQ ID NO: 5:	
120	(i) SEQUENCE CHARACTERISTICS:	
121	(A) LENGTH: 172 base pairs	
122	(B) TYPE: nucleic acid	
123	(C) STRANDEDNESS: single	
124	(D) TOPOLOGY: linear	
126	(ii) MOLECULE TYPE: Genomic DNA	
128	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:	
130	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
131	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
132	ATTTCCATAA ATATTAATAA ATAATTAAAA ATAATAATAAT AAATAATTAA TC	172
134	(2) INFORMATION FOR SEQ ID NO: 6:	
136	(i) SEQUENCE CHARACTERISTICS:	
137	(A) LENGTH: 172 base pairs	
138	(B) TYPE: nucleic acid	
139	(C) STRANDEDNESS: single	
140	(D) TOPOLOGY: linear	
142	(ii) MOLECULE TYPE: Genomic DNA	
144	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:	
146	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
147	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120

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TECH CENTER 1600/2900

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/308,830

DATE: 08/10/2000  
TIME: 18:06:36

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

148	ATTTCCATAA ATATTAATAA ATAATTAAAAA ATAAAATAAT AAATAATTAA TC	172
151	(2) INFORMATION FOR SEQ ID NO: 7:	
153	(i) SEQUENCE CHARACTERISTICS:	
154	(A) LENGTH: 172 base pairs	
155	(B) TYPE: nucleic acid	
156	(C) STRANDEDNESS: single	
157	(D) TOPOLOGY: linear	
159	(ii) MOLECULE TYPE: Genomic DNA	
161	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:	
163	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
164	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
165	ATTTCCATAA ATATTAATAA ATAATTAAAAA ATAAAATAAT AAATAATTAA TC	172
167	(2) INFORMATION FOR SEQ ID NO: 8:	
169	(i) SEQUENCE CHARACTERISTICS:	
170	(A) LENGTH: 172 base pairs	
171	(B) TYPE: nucleic acid	
172	(C) STRANDEDNESS: single	
173	(D) TOPOLOGY: linear	
175	(ii) MOLECULE TYPE: Genomic DNA	
177	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:	
179	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
180	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
181	ATTTCCATAA ATATTAATAA ATAATTAAAAA ATAAAATAAT AAATAATTAA TC	172
183	(2) INFORMATION FOR SEQ ID NO: 9:	
185	(i) SEQUENCE CHARACTERISTICS:	
186	(A) LENGTH: 172 base pairs	
187	(B) TYPE: nucleic acid	
188	(C) STRANDEDNESS: single	
189	(D) TOPOLOGY: linear	
191	(ii) MOLECULE TYPE: Genomic DNA	
193	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:	
195	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
196	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
197	ATTTCCATAA ATATTAATAA ATAATTAAAAA ATAAAATAAT AAATAATTAA TC	172
200	(2) INFORMATION FOR SEQ ID NO: 10:	
202	(i) SEQUENCE CHARACTERISTICS:	
203	(A) LENGTH: 172 base pairs	
204	(B) TYPE: nucleic acid	
205	(C) STRANDEDNESS: single	
206	(D) TOPOLOGY: linear	
208	(ii) MOLECULE TYPE: Genomic DNA	
210	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:	
212	CCATCACCAT CACCAAGAAG AAATAATTAC ATATTAATAA CAATACATAT GTAATAATAA	60
213	TAAATATATA AATAAAATAA TTACATATTA AAAATAATAC TTAATTATAA AAACACTATA	120
214	ATTTCCATAA ATATTAATAA ATAATTAAAAA ATAAAATAAT AAATAATTAA TC	172
216	(2) INFORMATION FOR SEQ ID NO: 11:	
218	(i) SEQUENCE CHARACTERISTICS:	
219	(A) LENGTH: 31 base pairs	
220	(B) TYPE: nucleic acid	

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/308,830

DATE: 08/10/2000  
TIME: 18:06:36

Input Set : A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

221	(C) STRANDEDNESS: single	
222	(D) TOPOLOGY: linear	
224	(ii) MOLECULE TYPE: Genomic DNA	
226	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:	
228	CCATCACGGG TGGATCCTTG AACAGGTGC A	31
230	(2) INFORMATION FOR SEQ ID NO: 12:	
232	(i) SEQUENCE CHARACTERISTICS:	
233	(A) LENGTH: 1851 base pairs	
234	(B) TYPE: nucleic acid	
235	(C) STRANDEDNESS: single	
236	(D) TOPOLOGY: linear	
238	(ii) MOLECULE TYPE: Genomic DNA	
239	(ix) FEATURE:	
241	(A) NAME/KEY: Coding Sequence	
242	(B) LOCATION: 828..1580	
243	(D) OTHER INFORMATION:	
246	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:	
248	CCATCACGCA TCACTCATGT TTGACAGCTT ATCATCGATA AGCTTACTTT TCGAACAGG 60	
249	TCTATCCTTG AAACAGGTGC AACATAGATT AGGGCATGGA GATTTACCA GAACTATGA 120	
250	ACGTATATAC TCACATCACG CAATCGGAA TTGATGACAT TGGAACTAAA TTCATCAAT 180	
251	TTGTTACTAA CAAGCAACTA GATTGACAAC TAATTCTCAA CAAACGTTAA TTTAACAAACA 240	
252	TTCAAGTAAC TCCCACCGC TCCATCAATG CTTACCGTAA GTAATCATAA CTTACTAAAA 300	
253	CCTTGTAC TCAAGGTTTT TTCTTTTGT CTTGTTCATG AGTTACCA ATA CTTCTATA 360	
254	TTATTGACAA CTAATTGAC AACTCTCAA TTATTTTCT GTCTACTCAA AGTTTTCTTC 420	
255	ATTTGATATA GTCTAATTCC ACCATCACTT CTTCCACTCT CTCTACCGTC ACAACTTCAT 480	
256	CATCTCTCAC TTTTCGTGT GGAAACACAT AATCAAAATAT CTTTCCGTTT TTACGCCACTA 540	
257	TCGCTACTGT GTCAACCTAA ATATAACCCCT TATCAATCGC TTCTTTAAAC TCATCTATAT 600	
258	ATAACATATT TCATCCTCCT ACCTATCTAT TCGTAAAAAG ATAAAAATAA CTATTGTTTT 660	
259	TTTTGTTATT TTATAATAAA ATTATTAATA TAAGTTAATG TTTTTAAAAA ATATACAAATT 720	
260	TTATTCTATT TATAGTTAGC TATTTTTCA TTGTTAGTAA TATTGGTGA TTGTAATAAC 780	
261	CTTTTAAAT CTAGAGGAGA ACCCAGATAT AAAATGGAGG AATATTA ATG GAA AAC 836	
262	Met Glu Asn	
263	1	
265	AAT AAA AAA GTA TTG AAG AAA ATG GTA TTT TTT GTT TTA GTG ACA TTT	884
266	Asn Lys Lys Val Leu Lys Met Val Phe Phe Val Leu Val Thr Phe	
267	5 10 15	
269	CTT GGA CTA ACA ATC TCG CAA GAG GTA TTT GCT CAA CAA GAC CCC GAT	932
270	Leu Gly Leu Thr Ile Ser Gln Glu Val Phe Ala Gln Gln Asp Pro Asp	
271	20 25 30 35	
273	CCA AGC CAA CTT CAC AGA TCT AGT TTA GTT AAA AAC CTT CAA AAT ATA	980
274	Pro Ser Gln Leu His Arg Ser Ser Leu Val Lys Asn Leu Gln Asn Ile	
275	40 45 50	
277	TAT TTT CTT TAT GAG GGT GAC CCT GTT ACT CAC GAG AAT GTG AAA TCT	1028
278	Tyr Phe Leu Tyr Glu Gly Asp Pro Val Thr His Glu Asn Val Lys Ser	
279	55 60 65	
281	GTT GAT CAA CTT TTA TCT CAC CAT TTA ATA TAT AAT GTT TCA GGG CCA	1076
282	Val Asp Gln Leu Leu Ser His His Leu Ile Tyr Asn Val Ser Gly Pro	
283	70 75 80	
285	AAT TAT GAT AAA TTA AAA ACT GAA CTT AAG AAC CAA GAG ATG GCA ACT	1124

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Input Set : A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

286	Asn Tyr Asp Lys Leu Lys Thr Glu Leu Lys Asn Gln Glu Met Ala Thr			
287	85	90	95	
289	TTA TTT AAG GAT AAA AAC GTT GAT ATT TAT GGT GTA GAA TAT TAC CAT	1172		
290	Leu Phe Lys Asp Lys Asn Val Asp Ile Tyr Gly Val Glu Tyr Tyr His			
291	100	105	110	115
293	CTC TGT TAT TTA TGT GAA AAT GCA GAA AGG AGT GCA TGT ATC TAC GGA	1220		
294	Leu Cys Tyr Leu Cys Glu Asn Ala Glu Arg Ser Ala Cys Ile Tyr Gly			
295	120	125	130	
297	GGG GTA ACA AAT CAT GAA GGG AAT CAT TTA GAA ATT CCT AAA AAG ATA	1268		
298	Gly Val Thr Asn His Glu Gly Asn His Leu Glu Ile Pro Lys Lys Ile			
299	135	140	145	
301	GTC GTT AAA GTA TCA ATC GAT GGT ATC CAA AGC CTA TCA TTT GAT ATT	1316		
302	Val Val Lys Val Ser Ile Asp Gly Ile Gln Ser Leu Ser Phe Asp Ile			
303	150	155	160	
305	GAA ACA AAT AAA AAA ATG GTA ACT GCT CAA GAA TTA GAC TAT AAA GTT	1364		
306	Glu Thr Asn Lys Lys Met Val Thr Ala Gln Glu Leu Asp Tyr Lys Val			
307	165	170	175	
309	AGA AAA TAT CTT ACA GAT AAT AAG CAA CTA TAT ACT AAT GGA CCT TCT	1412		
310	Arg Lys Tyr Leu Thr Asp Asn Lys Gln Leu Tyr Thr Asn Gly Pro Ser			
311	180	185	190	195
313	AAA TAT GAA ACT GGA TAT ATA AAG TTC ATA CCT AAG AAT AAA GAA AGT	1460		
314	Lys Tyr Glu Thr Gly Tyr Ile Lys Phe Ile Pro Lys Asn Lys Glu Ser			
315	200	205	210	
317	TTT TGG TTT GAT TTT TTC CCT GAA CCA GAA TTT ACT CAA TCT AAA TAT	1508		
318	Phe Trp Phe Asp Phe Pro Glu Pro Glu Phe Thr Gln Ser Lys Tyr			
319	215	220	225	
321	CTT ATG ATA TAT AAA GAT AAT GAA ACG CTT GAC TCA AAC ACA AGC CAA	1556		
322	Leu Met Ile Tyr Lys Asp Asn Glu Thr Leu Asp Ser Asn Thr Ser Gln			
323	230	235	240	
325	ATT GAA GTC TAC CTA ACA ACC AAG TAACTTTTG CTTTTGGCAA CCTTACCTAC	1610		
326	Ile Glu Val Tyr Leu Thr Thr Lys			
327	245	250		
329	TGCTGGATTAGAAATTTTA TTGCAATTCT TTTATTAATG TAAAAACCGC TCATTTGATG	1670		
330	AGCGGGTTTG TCTTATCTAA AGGAGCTTTA CCTCCTAATG CTGCAAATT TTAAATGTTG	1730		
331	GATTTTGTA TTGCTCTATT GTATTTGATG GGAAATCCCA TTTTCGACA GACATCGTCG	1790		
332	TGCCACCTCT AACACCAAAA TCATAGACAG GAGCTTGTAG CTTAGCAACT ATTTTATCGT	1850		
333	C			1851
335	(2) INFORMATION FOR SEQ ID NO: 13:			
337	(i) SEQUENCE CHARACTERISTICS:			
338	(A) LENGTH: 251 amino acids			
339	(B) TYPE: amino acid			
340	(C) STRANDEDNESS: single			
341	(D) TOPOLOGY: linear			
343	(ii) MOLECULE TYPE: protein			
344	(v) FRAGMENT TYPE: internal			
346	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:			
348	Met Glu Asn Asn Lys Lys Val Leu Lys Lys Met Val Phe Phe Val Leu			
349	1	5	10	15
350	Val Thr Phe Leu Gly Leu Thr Ile Ser Gln Glu Val Phe Ala Gln Gln			

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VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/308,830

DATE: 08/10/2000  
TIME: 18:06:37

Input Set A:\Pto.amc  
Output Set: N:\CRF3\08102000\I308830.raw

L:5 M:220 C: Keyword misspelled or invalid format, [(1) GENERAL INFORMATION:]  
L:9 M:220 C: Keyword misspelled or invalid format, [(ii) TITLE OF INVENTION:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]

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*C. Lee*  
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AUG 15 2000

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1645

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/308,830

DATE: 08/08/2000  
 TIME: 14:42:24

Input Set : A:\Seqlist.txt  
 Output Set: N:\CRF3\08082000\I308830.raw

## SEQUENCE LISTING

- C--> 5 (1) GENERAL INFORMATION:
  - 7 (i) APPLICANT: Regents of the University of Minnesota
  - C--> 9 (ii) TITLE OF INVENTION: MUTANTS OF STREPTOCOCCAL TOXIN A AND METHODS OF USE
  - 10 (iii) NUMBER OF SEQUENCES: 13
  - 12 (iv) CORRESPONDENCE ADDRESS:
    - 15 (A) ADDRESSEE: Merchant & Gould P.C.
    - 16 (B) STREET: P.O. Box 2903
    - 17 (C) CITY: Minneapolis
    - 18 (D) STATE: MN
    - 19 (E) COUNTRY: USA
    - 20 (F) ZIP: 55402-0903
  - 22 (v) COMPUTER READABLE FORM:
    - 23 (A) MEDIUM TYPE: Diskette
    - 24 (B) COMPUTER: IBM Compatible
    - 25 (C) OPERATING SYSTEM: DOS
    - 26 (D) SOFTWARE: FastSEQ for Windows Version 2.0
  - 28 (vi) CURRENT APPLICATION DATA:
    - 29 (A) APPLICATION NUMBER: US/09/308,830
    - C--> 30 (B) FILING DATE: 04-Aug-1999
    - 36 (C) CLASSIFICATION:
    - 38 (vii) PRIOR APPLICATION DATA:
      - 34 (A) APPLICATION NUMBER: PCT/US97/22228
      - 35 (B) FILING DATE: 05-DEC-1997
      - 39 (A) APPLICATION NUMBER: 60/032,930
      - 40 (B) FILING DATE: 06-DEC-1996
    - 44 (viii) ATTORNEY/AGENT INFORMATION:
      - 45 (A) NAME: Skoog, Mark T
      - 46 (B) REGISTRATION NUMBER: 40,178
      - 47 (C) REFERENCE/DOCKET NUMBER: 600.346USWO
    - 49 (ix) TELECOMMUNICATION INFORMATION:
      - 50 (A) TELEPHONE: 612-332-5300
      - 51 (B) TELEFAX: 612-332-9081
      - 52 (C) TELEX:

Does Not Comply  
 Corrected Diskette Needed

## ERRORED SEQUENCES

- 335 (2) INFORMATION FOR SEQ ID NO: 13:
  - 337 (i) SEQUENCE CHARACTERISTICS:
    - 338 (A) LENGTH: 251 amino acids
    - 339 (B) TYPE: amino acid
    - 340 (C) STRANDEDNESS: single
    - 341 (D) TOPOLOGY: linear
  - 343 (ii) MOLECULE TYPE: protein
  - 344 (v) FRAGMENT TYPE: internal

**RECEIVED**

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TECH CENTER 1600/2800

RAW SEQUENCE LISTING  
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 TIME: 14:42:24

Input Set : A:\Seqlist.txt  
 Output Set: N:\CRF3\08082000\I308830.raw

346 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:  
 348 Met Glu Asn Asn Lys Lys Val Leu Lys Lys Met Val Phe Phe Val Leu  
 349 1 5 10 15  
 350 Val Thr Phe Leu Gly Leu Thr Ile Ser Gln Glu Val Phe Ala Gln Gln  
 351 20 25 30  
 352 Asp Pro Asp Pro Ser Gln Leu His Arg Ser Ser Leu Val Lys Asn Leu  
 353 35 40 45  
 354 Gln Asn Ile Tyr Phe Leu Tyr Glu Gly Asp Pro Val Thr His Glu Asn  
 355 50 55 60  
 356 Val Lys Ser Val Asp Gln Leu Leu Ser His His Leu Ile Tyr Asn Val  
 357 65 70 75 80  
 358 Ser Gly Pro Asn Tyr Asp Lys Leu Lys Thr Glu Leu Lys Asn Gln Glu  
 359 85 90 95  
 360 Met Ala Thr Leu Phe Lys Asp Lys Asn Val Asp Ile Tyr Gly Val Glu  
 361 100 105 110  
 362 Tyr Tyr His Leu Cys Tyr Leu Cys Glu Asn Ala Glu Arg Ser Ala Cys  
 363 115 120 125  
 364 Ile Tyr Gly Gly Val Thr Asn His Glu Gly Asn His Leu Glu Ile Pro  
 365 130 135 140  
 366 Lys Lys Ile Val Val Lys Val Ser Ile Asp Gly Ile Gln Ser Leu Ser  
 367 145 150 155 160  
 368 Phe Asp Ile Glu Thr Asn Lys Lys Met Val Thr Ala Gln Glu Leu Asp  
 369 165 170 175  
 370 Tyr Lys Val Arg Lys Tyr Leu Thr Asp Asn Lys Gln Leu Tyr Thr Asn  
 371 180 185 190  
 372 Gly Pro Ser Lys Tyr Glu Thr Gly Tyr Ile Lys Phe Ile Pro Lys Asn  
 373 195 200 205  
 374 Lys Glu Ser Phe Trp Phe Asp Phe Phe Pro Glu Pro Glu Phe Thr Gln  
 375 210 215 220  
 376 Ser Lys Tyr Leu Met Ile Tyr Lys Asp Asn Glu Thr Leu Asp Ser Asn  
 377 225 230 235 240  
 378 Thr Ser Gln Ile Glu Val Tyr Leu Thr Thr Lys  
 379 245 250

E--&gt; 386 7

VERIFICATION SUMMARY  
PATENT APPLICATION: US/09/308,830

DATE: 08/08/2000  
TIME: 14:42:25

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\08082000\I308830.raw

L:5 M:220 C: Keyword misspelled or invalid format, [(1) GENERAL INFORMATION:]  
L:9 M:220 C: Keyword misspelled or invalid format, [(ii) TITLE OF INVENTION:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:30 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:386 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:13

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